Space Weather Forecast

Issued on Thursday, 09 June 2022 at 13:28 Local

This forecast provides a four day assessment of space weather events. The probabilities stated below are for reaching or exceeding the given levels. For more information about space weather impacts please see the Met Office Space Weather Scales https://www.metoffice.gov.uk/weather/learn-about/space-weather/uk-scales

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Space Weather Forecast Headline: No significant space weather activity is expected.

Analysis of Space Weather Activity over past 24 hours
Solar Activity: Solar activity has been Low, with three Common-class flares. Two of these flares were from an increasingly complex region in the south centre disc, which is the only visible sunspot region. The remaining flare emanated from a region just beyond the northeast limb, which is likely to become visible during the next 24 hours. No Earth-directed CMEs were observed in the last 24 hours.

Solar Wind / Geomagnetic Activity: The solar wind speeds have been ambient, currently averaging around 300km/s. Total magnetic field strength was weak, with the north-south component also varying weakly. Geomagnetic activity was Quiet (Kp 0-2).

Energetic Particles / Solar Radiation: No solar radiation storms were observed.

Four-Day Space Weather Forecast Summary
Solar Activity: Solar activity is expected to start mainly Low, but with an increasing risk of Moderate activity due to an evolving sunspot in centre disc, and returning regions on the eastern limb.

Solar Wind / Geomagnetic Activity: No Earth-directed CMEs are currently forecast. The Earth may connect with a fast solar wind either late on day 1 or early on day 2 with slightly elevated winds possible. Geomagnetic activity is forecast to be mainly Quiet with only a slight chance of Active either late on day 1 or into day 2 due to the potential cast wind connection.

Energetic Particles / Solar Radiation: No solar radiation storms are expected.

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Met Office

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Geomagnetic Storms:

Geo-Magnetic Storm Probability (Exceedance)	Level	Past 24 Hours (Yes/No)	Day 1 (00-24 UTC) (%)	Day 2 (00-24 UTC) (%)	Day 3 (00-24 UTC) (%)	Day 4 (00-24 UTC) (%)
Minor or Moderate	G1 to G2	No	1	1	1	1
Strong	G3	No	1	1	1	1
Severe	G4	No	1	1	1	1
Extreme	G5	No	1	1	1	1

Radio Blackouts - X Ray Flares:

X Ray Flares Probability	Level	Past 24 Hours (Yes/No)	Day 1 (00-24 UTC) (%)	Day 2 (00-24 UTC) (%)	Day 3 (00-24 UTC) (%)	Day 4 (00-24 UTC) (%)
Active	R1-R2 M Class	No	5	5	5	10
Very Active	R3 to R5 X	No	1	1	1	1

Solar Radiation Storms - (High Energy Protons):

Radiation Storms Probability (Exceedance)	Level (cm^{-2} sr^{-1} s^{-1})	Past 24 Hours (Yes/No)	Day 1 (00-24 UTC) (%)	Day 2 (00-24 UTC) (%)	Day 3 (00-24 UTC) (%)	Day 4 (00-24 UTC) (%)
Active	≥ S1	No	1	1	1	1
Very Active	≥ S3 *	No	1	1	1	1

* S3 ≥ 10 MeV ≥ 1000 pfu and / or ≥ 50 MeV ≥ 10 pfu. (pfu = $cm^{-2}sr^{-1}s^{-1}$)

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